FOX 500 DA6

SIX OUTPUT FIBER OPTIC TRANSMITTER FOR RGBHV, AUDIO, AND RS-232

- **Transmit RGBHV, audio, and RS-232 signals over a single fiber**
- **Six individually isolated outputs**
- **All digital, zero compression technology for high performance signal transmission**
- **Pixel-for-pixel image quality, up to 1600x1200**
- **850 nm multimode and 1310 nm singlemode models available**
- **Buffered input loop-through**
- **30 user memory presets**
- **RS-232 serial control**
- **Real-time status LED indicators for troubleshooting and monitoring**

The Extron FOX 500 DA6 is a fiber optic transmitter and six output distribution amplifier for long haul distribution of high resolution RGB, audio, and RS-232 control signals over single fiber links. Engineered for reliability and exceptional high resolution image performance, it uses Extron's exclusive all digital, zero compression technology, and also includes a host of features for enhancing A/V system integration.

DESCRIPTION

The Extron **FOX 500 DA6** is a Six Output Fiber Optic Transmitter for long haul transmission of high resolution RGB, audio, and RS-232 control signals over a single fiber. It provides six optical outputs for distribution to FOX 500 and FOX 500 DVI Fiber Optic Receivers, each via a single fiber link. Engineered for reliability and exceptional high resolution image performance, the FOX 500 DA6 uses Extron's exclusive zero compression, all digital technology to deliver perfect pixel-for-pixel transmission of computer-video images up to UXGA (1600x1200) resolution. It also features active optical signal splitting so that original transmitter power levels are maintained for all outputs. Designed specifically for A/V systems, the FOX 500 DA6 includes a host of integrator-friendly features such as flexible input connectivity, image adjustments and calibration, active PC audio to balanced audio interfacing, RS-232 control from multiple locations, rack-mount capability, and real-time system monitoring.

The FOX 500 DA6 is ideal for a wide range of applications requiring long distance transmission of high resolution content with the highest quality. Because transmission of content is inherently secure and immune to outside interference, fiber applications are favored in government, military, and medical environments. The FOX 500 DA6 features industry standard LC-type connectivity.

The FOX 500 DA6 MM supports multimode fiber at 850 nm, which is typically used within buildings or facilities with moderate-range transmission distances up to 150 meters (492 feet). The FOX 500 DA6 SM supports singlemode as well as multimode fiber at 1310 nm. Singlemode fiber offers long-range transmission capability over extreme distances of up to 30 km (18.75 miles). It is used in very large facilities such as airports and stadiums, and for connecting over very long distances between facilities such as university campuses. Both models must be matched with the corresponding multimode or singlemode versions of the FOX 500 and FOX 500 DVI receivers.

For convenient integration into A/V systems, the FOX 500 DA6 accepts, digitizes, and transmits all RGB format signals – RGBHV, RGBS, RGsB, and RsGsBs, along with balanced or unbalanced stereo audio and RS-232 control signals. The FOX 500 receiver outputs RGB computer-video, audio, and control signals, while the FOX 500 DVI receiver outputs DVI-D digital video, audio, and control signals, effectively providing an ultra-long distance analog-to-digital video conversion.

The FOX 500 DA6 is ideal for many installations that require long haul distribution of A/V and RS-232 control signals from a single location. In digital signage applications, for example, the FOX 500 DA6 can be used to deliver video, audio, and uni-directional control of multiple, remotely located displays in hotels, airports, malls, and casinos. A multi-level building is another ideal installation for a FOX 500 DA6, as it can distribute signals to displays located on multiple floors.

FEATURES

- **Extends RGB computer-video, stereo audio, and RS-232 control signals very long distances over a single fiber**
- **Six individually isolated outputs** – The FOX 500 DA6 utilizes active signal splitting to maintain equal transmitter power to all outputs, maximizing distance capabilities by ensuring full availability of optical loss budget for each output.
- **All digital, zero compression technology provides pixel-for-pixel performance with signals up to 1600x1200** – The FOX 500 DA6 delivers uncompressed pixel-for-pixel transmission of video signals to ensure optimal image quality at resolutions up to UXGA (1600x1200). Signal resolutions higher than UXGA can be accommodated, but will not be sampled at a 1:1 pixel ratio.
- **Industry standard LC connectors provide reliable physical connectivity and precise fiber core alignment**
- **850 nm multimode and 1310 nm singlemode models available**
- **Second fiber link on Output 1 enables bi-directional RS-232 pass-through, control from FOX 500 DA6 or receiver, and real-time system monitoring** – Simplifies system integration by enabling bi-directional box-to-box communications. This allows for streamlined set-up with Auto-Image™ and enhanced monitoring with alarm notification capability.
- **Buffered input loop-through** – A buffered input loop-through on the FOX 500 DA6 provides an output signal to drive a local monitor.
- **30 user memory presets** – These presets are available for saving and recall of size, position, and detail information for multiple incoming sources. The ability to save and recall presets is useful in switcher-based environments.
- **Active PC audio to balanced audio interfacing**
- **Audio gain & attenuation adjustment and muting capability**
- **RS-232 serial control** – The FOX 500 DA6 features front and rear panel RS-232 serial ports for control and configuration. A second fiber link on Output 1 allows for control of the FOX 500 DA6 and the corresponding receiver at either location, as well as remote verification of fiber link status and the presence of input RGB and audio signals.
- **Real-time status LED indicators for troubleshooting and monitoring** – LEDs on the front panel verify the presence of RGB and audio input signals as well as active fiber links between the FOX 500 DA6 and the receiver linked to Output 1. Requires a second fiber link on Output 1.
- **Compatible with FOX 500 and FOX 500 DVI Fiber Optic Receivers**
- **Rack-mountable 1U, full rack width metal enclosure**
- **Internal international power supply**

OPTICAL SPECIFICATIONS

Number/type ..... 6 fiber optic outputs
Connectors ..... 6 LC connectors
Operating distance
Singlemode ..... 30 km (18.75 miles) with singlemode (SM) cables with an Extron singlemode unit
Multimode ..... 300 m (985') with 62.5 µm multimode (MM) cables with an Extron multimode unit
1 km (3280') with 50 µm multimode (MM) cables with an Extron multimode unit
2 km (6561') with 50 µm 2000 MHz bandwidth laser multimode cable with an Extron multimode unit
NOTE: Operating distance is approximate. These are typical maximum distances that may vary depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.
Nominal peak wavelength ..... 850 nm for FOX 500 DA6 MM, 1310 nm for FOX 500 DA6 SM
Data rate ..... 4.25 Gbps
Transmission power
Singlemode ..... -5 dBm, typical
Multimode ..... -5 dBm, typical
Maximum receiver sensitivity
Singlemode ..... -18 dBm, typical
Multimode ..... -12 dBm, typical
Optical loss budget
Singlemode ..... 13 dB, maximum
Multimode ..... 7 dB, maximum

VIDEO

Gain ..... Unity
Pixel data bit depth ..... 8 bits per channel, 3 channels (R, G, B)
Maximum resolution ..... 1600x1200 @ 60 Hz, digitized pixel by pixel; higher resolutions up to 2048x1120, undersampled

VIDEO INPUT AND LOOP THROUGH

Number/signal type ..... 1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs input
1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs loop-through
Connectors ..... 1 x 5 female BNC or (1) female 15-pin HD for input
(1) female 15-pin HD for loop-through
Nominal level ..... 0.7 Vp-p for RGB
Minimum/maximum levels ..... Analog: 0.3 V to 1.5 Vp-p with no offset
Impedance ..... 75 ohms
Horizontal frequency ..... 24 kHz to 100 kHz
Vertical frequency ..... 40 Hz to 120 Hz
Return loss ..... <-40 dB @ 5 MHz
NOTE: These transceivers are class 1 laser products. They meet the safety regulations of IEC-60825, FDA 21, CFR 1040.10, and FDA 21 CFR 1040.11.

SYNC

Input type ..... Autodetect RGBHV, RGBS, RGsB, RsGsBs
Input level ..... 2.5 V to 5.0 Vp-p
Input impedance ..... 10k ohms
Polarity ..... Positive or negative (follows input or can be set by user)

AUDIO

Gain
Range ..... Adjustable, -18 dB to +10 dB
Default
Captive screw connector ..... Unbalanced output: -6 dB; balanced output: 0 dB
Mini stereo jack ..... Unbalanced output: 0 dB

Frequency response ..... 20 Hz to 20 kHz, ±0.5 dB
THD + Noise ..... 0.10% @ 1 kHz at nominal level
S/N ..... >80 dB at maximum output (unweighted)
CMRR ..... 65 dB @ 20 Hz to 20 kHz
Audio bits per sample ..... 18 bits per channel, 2 channels (L, R)
Sampling rate ..... 48 kHz

AUDIO INPUT

Number/signal type ..... 2 inputs (mixed): 1 balanced stereo; 1 unbalanced stereo or 2 unbalanced mono
Connectors ..... (1) 3.5 mm captive screw connector, 5 pole
(1) 3.5 mm mini stereo jack
Impedance ..... 18k ohms unbalanced, 20k ohms balanced, DC coupled
Nominal level ..... +4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
Maximum level ..... +17 dBV, (unbalanced) at 1% THD+N
NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

CONTROL/REMOTE

Serial control ports
Control ..... 1 RS-232, 3.5 mm captive screw connector, 5 pole (3 pins are used) (rear panel)
1 RS-232, 2.5 mm mini stereo jack (front panel)
Pass-through ..... 1 RS-232, 3.5 mm captive screw connector, 5 pole (3 pins are used) (rear panel); in parallel with
1 RS-232, 2.5 mm mini stereo jack (front panel)
Baud rate and protocol
Control ..... 9600 baud, 8 data bits, 1 stop bit, no parity
Pass-through ..... 9600 to 38400 baud
Serial control pin configurations ..... Captive screw connectors: 1 = Tx, 2 = Rx, 3 = GND
Mini stereo jack: tip = Tx, ring = Rx, sleeve = GND
Program control ..... Extron's control/configuration program for Windows®
Extron's Simple Instruction Set (SIS™)

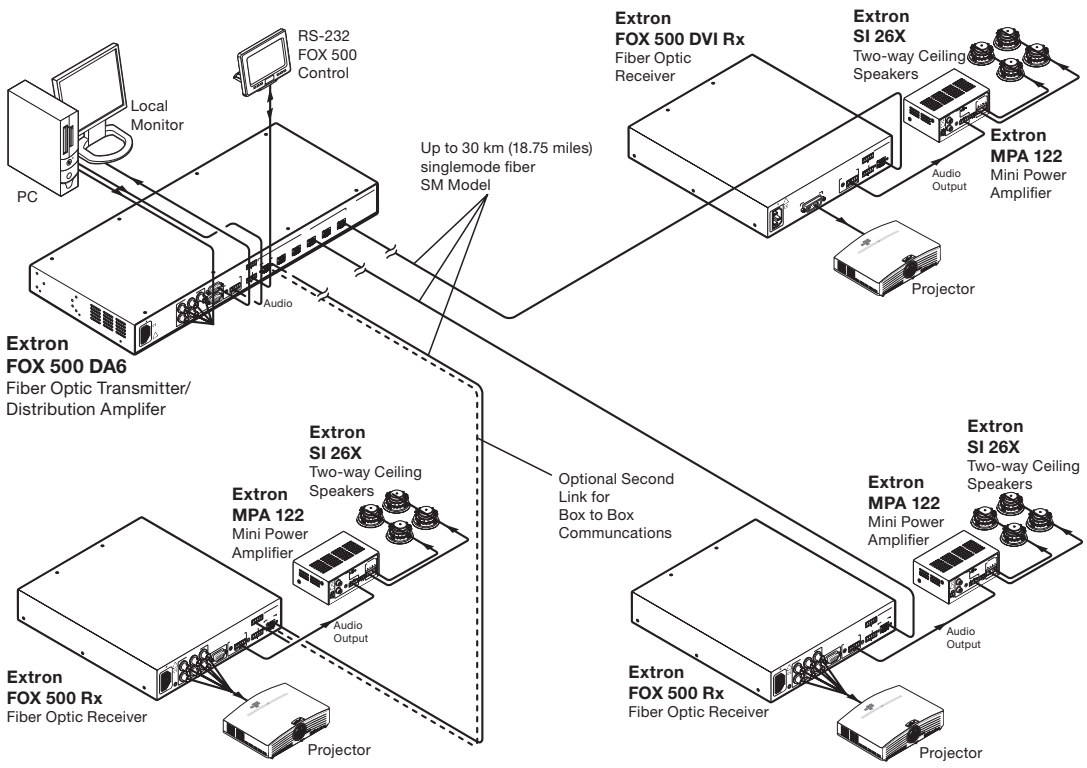
GENERAL

Power ..... 100 VAC to 240 VAC, 50-60 Hz, 11 watts, internal
Cooling ..... Convection, vents on top and side panels
Mounting ..... Rack mountable with included brackets
Enclosure type ..... Metal
Enclosure dimensions ..... 1.7" H x 17.4" W x 9.5" D (1U high, full rack wide)
(4.3 cm H x 44.2 cm W x 24.1 cm D)
(Depth excludes connectors.)
Product weight ..... 3.9 lbs (1.8 kg)
Shipping weight ..... 7 lbs (4 kg)
DIM weight
USA/Canada ..... 7 lbs (4 kg)
International ..... 8 lbs (4 kg)
Vibration ..... ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance
Safety ..... CE, CUL, FDA Class 1, UL
EMI/EMC ..... CE, C-tick, FCC Class A, ICES, VCCI
MTBF ..... 30,000 hours
Warranty ..... 3 years parts and labor
NOTE: All nominal levels are at ±10%.

Model	Version Description	Part number
FOX 500 DA6 MM	Multimode	60-863-01
FOX 500 DA6 SM	Singlemode	60-863-02

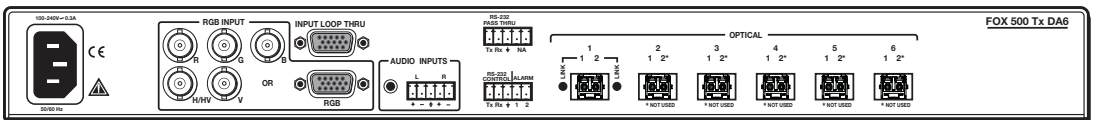
Specifications are subject to change without notice.

APPLICATION DIAGRAM



PANEL DRAWINGS

Front



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